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TAKE-APART PICNIC GRILL

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The invention concerns a take-apart picnic grill with two hollow profiles to be disposed parallel to each other, which are connected by a plurality of rods to form a grilling surface.

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A picnic grill of this type is disclosed in U.S.-6,546,851 B1. This prior art picnic grill comprises two parallel square hollow profiles which are connected at both ends and at a distance to each other by screwable rods, and between which run a plurality of rods which form the grilling surface. At the four ends of the two parallel hollow profiles there are vertical holes into which the legs can be inserted. The disadvantage of this prior art grill is that it consists of a large number of individual parts with no provision made for storing the latter so that individual items do not get lost after taking the grill apart.

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This invention is based on the task of creating a grill of the above type which ensures that once the grill is taken apart, it can be safely stored with no risk of losing individual parts.

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To solve this task the picnic grill according to the invention is characterised in that the hollow profiles are tubes, the diameter of one of which is sufficiently larger than the other to allow the tube with the smaller diameter to be inserted inside the tube with the larger diameter for transport purposes.

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Hence when the grill is not in use it can be taken apart and the smaller tube can be inserted inside the larger one. The inside of the smaller tube can then serve to accommodate all the remaining parts.

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The inner diameter of the smaller tube is preferably sized so that all the connecting and supporting rods of the grill can be accommodated in its interior. Thus the tube with the larger diameter serves at the same time as a container for accommodating all the other parts of the grill.

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The risk of losing individual parts is overcome by providing caps or plugs to close off the ends of the tube with the larger diameter.

1 To assemble the rods which form the grilling surface and connect the two
tubes, one of the tubes is preferably provided with holes along the entire
length of this tube whilst in the other tube there are slots in the same
number and position, preferably extending through 90° from the top vertex
5 line of the tube through to the lateral vertex line on the side of the tube
facing the other tube. In this way the rods can be inserted from above and
secured within the slotted tube after the two tubes are pulled together.

In another embodiment, the slotted tube is provided with a longitudinal slot
10 on the side facing the other tube, and the slots in which the rods are inserted
are contrived in the bottom edge of this longitudinal slot. In this case, too,
the tubes can be pulled together to prevent the rods from coming loose
upwardly.

15 A notch is preferably provided at the end of at least one of the tubes for the
purpose of cleaning the rods after grilling.

At the ends of the two tubes there are screwable rods which hold the two
tubes together. Legs which may be vertically adjustable may also be provided
20 at the ends of the two tubes.

Preferred embodiments of the invention will be described in more detail below
with reference to the enclosed drawings.

25 Fig. 1 is a perspective view of a grill according to the invention
in the assembled state;

30 Fig. 2 shows how the packed-up grill is clipped to a bicycle
frame;

Fig. 3 is a perspective view of an alternative embodiment of one
of the two tubes.

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1 Fig. 1 shows both tubes, designated as 1 and 2. One of the tubes has a
slightly larger diameter than the other so that this other tube can be inserted
inside the first tube. Thus the drawing is not to scale. The two tubes are
disposed parallel to each other and at a distance from each other and a
5 plurality of rods 3 are mounted between tubes 1,2. To the side of tube 1, the
rods are inserted in holes 4 which are distributed along the length of the
tube. Holes 4 have a slightly larger diameter than the rods so that the latter
can be inserted easily. On the opposite side, slots 5 are provided in tube 2,
distributed along the length of tube 2 to coincide with the distribution of
10 holes 4 in the other tube 1. The slots preferably run through an angle of
about 90° from the top vertex line of the tube through to the side vertex line
facing the other tube. When the two tubes 1,2 are pushed towards each other
after inserting rods 3, the rods pass through the slots and far enough into
the tube to ensure that they cannot be lifted out of position on this side
15 either.

Instead of holes, tube 1 may have slots too, as shown in tube 2. This
facilitates the task of assembling the grill even further. In this case, too, the
slots should leave a portion of the top tube wall intact as with slots 5 so that
20 rods 3 can be prevented from coming loose upwardly by pulling tubes 1,2
together.

To connect the two tubes 1,2 there are connecting rods 10 which run through
holes (not shown) in the two opposite tube walls at the ends of the tubes and
25 are provided at their ends with, for example, a thread onto which wing nuts
11 can be screwed. By tightening these wing nuts the tubes can be pulled
together until they are maintained at a distance by the rods abutting against
each opposite tube wall. This forms a stable grilling surface.

30 Also provided in the end portions of tubes 1,2 there are holes 7 running
vertically through both tube walls, which, in at least one of the tube walls,
can be provided with an inner thread, and into which supports 8 can be
screwed. It is also possible to twist nuts 12 onto supports 8, which are
accommodated underneath tubes 1,2 and can be twisted along the thread to
35 adjust the height of the grilling surface.

1 It is expedient to make the two tubes equally long. The length of the tubes
should preferably be somewhere between 20 and 30 cm.

At the end of tube 1, a notch 6 is contrived in the tube wall for the purpose
5 of wiping off any remainders of charcoal or grilled food left sticking to rods 3
after grilling.

Tubes 1,2, rods 3, connecting rods 10 and supports 8 are preferably made
from metal, in particular steel, above all stainless steel.

10 The diameter of the rods 3 which form the grilling surface is preferably
somewhere between 2 and 6 mm, and 3 mm in particular. These thicknesses
are sufficient to produce a stable grilling surface whilst also facilitating the
space-saving stowing away of the individual parts of the grill. This is why
15 rods 3 are also slightly shorter than tubes 1,2. The number of rods 3 should
be selected so that when the grill is assembled, the gap between the metal
rods is not less than 5 mm and not more than 30 mm. A gap of 20 mm is
preferred.

20 Concerning connecting rods 10, wing nuts 11 can be replaced at one end by
a headpiece or a plate which prevents the connecting rods from being pulled
through the corresponding hole in the tube. A wing nut need then be screwed
on from one side only.

25 It is also possible, however, to provide the ends of connecting rods 10 with
threads and to cut a thread into the corresponding holes in tubes 1,2, at
least on one side.

In this way the grill can also be tensioned by screwing the connecting rods
30 into the holes.

The diameters of the two tubes 1,2 are contrived so that one of the tubes can
be inserted inside the other, and so that the inner tube is able to
accommodate the rods 3 that form the grilling surface, the connecting rods
35 10, the supports 8 and any nuts that are used. All the individual parts of the
grill are therefore housed inside the tube with the larger diameter, designated
as 13 in Fig. 2. Both ends of this tube can be topped with caps 14 to prevent

1 the parts inside from falling out. One end can, however, also be sealed off
with a seal as shown on the left of Fig. 2. One detachable cap 14 suffices for
the purpose of inserting the second tube and the other parts of the grill.

5 Fig. 2 shows an example of how the packed-up grill can be attached to a
bicycle frame 16. Two brackets 15, as used to attach pumps to bicycles, can
be used to clip the grill to the bicycle frame.

When assembling the grill, the two tubes 1,2 are connected first by
10 connecting rods 10, but are not yet pulled together. The rods 3 which form
the grilling surface are then first inserted into holes 4 and then placed in the
opposite slots 5. Connecting rods 10 are then tensioned with the help of wing
nuts 11 or other tensioning devices so that tubes 1,2 are pulled together
until rods 3 abut against the opposite inner walls of the tubes. Finally,
15 supports 8 are screwed or pushed into position and vertically adjusted.

After grilling, the rods 3 serving as the grilling surface can be wiped clean of
any remaining bits of grilled food using notch 6 at one end of tube 1.

20 The advantages of the grill according to the invention lie in its compact
transport size and in the relatively quick and easy assembly and disassembly
procedure. It is also lightweight. The grill can easily be transported on a bike,
motorbike, in a car or on a boat, for example.

25 Fig. 3 shows a tube which corresponds to tube 2 of Fig. 1 and is also
provided with slots in which the grill rods can be placed. The tube designated
as 17 in Fig. 3 has a longitudinal slit 18 running along a lateral contour line
across its entire length or part of its length, in one edge of which - the
bottom edge in Fig. 3 - crosswise slots 19 are contrived. These slots fulfil the
30 same function as slots 5 in Fig. 1. This tube also has horizontal holes 20
running through both opposite tube walls to accommodate connecting rods
10, and a vertical hole 22 running through both tube walls to accommodate
supports 8.

1 In the drawings, the two tubes 1,2 are shown as circular cylindrical tubes.
This embodiment is indeed particularly advantageous. Other cross-section
profiles can also be used, however - a quadratic cross section, for example,
5 as disclosed in the document mentioned in the introduction, or an elliptical
cross section.

The described arrangement of a longitudinal slit 18 and slots 19 oriented
crosswise to one edge thereof can also be used for both tubes. This facilitates
the process of assembling the grill even further.

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